

CLAIMS

What is claimed is:

1 1. A heat dissipation apparatus, comprising:
2 a heat sink that is adapted to receive a processor mounted thereto, the heat sink
3 comprising an internal chamber that is adapted to receive a fluid flow that removes
4 heat from the heat sink.

1 2. The apparatus of claim 1, further comprising at least one hollow prong
2 that extends from the heat sink, the at least one hollow prong being in fluid
3 communication with the internal chamber of the heat sink such that fluid forced into
4 the internal chamber flows through the at least one hollow prong.

1 3. The apparatus of claim 2, wherein the at least one hollow prong
2 comprises a cylindrical tube having an internal passage, the internal passage being in
3 fluid communication with the internal chamber of the heat sink.

1 4. The apparatus of claim 2, wherein the heat sink comprises a top surface
2 and wherein the at least one hollow prong extends from the top surface of the heat
3 sink.

1 5. The apparatus of claim 2, further comprising a fan that is positioned
2 such that fluid forced from the fan flows over external surfaces of the at least one
3 prong.

1 6. The apparatus of claim 5, wherein the fan is part of an external flow
2 fan module that is mounted to the heat sink.

1 7. The apparatus of claim 1, further comprising an inlet that is in fluid
2 communication with the internal chamber of the heat sink such that fluid forced into
3 the inlet flows into the internal chamber.

1 8. The apparatus of claim 7, further comprising a fan that is in fluid
2 communication with the inlet.

1 9. The apparatus of claim 7, wherein the fan comprises part of an internal
2 flow fan module that is mounted to the heat sink.

1 10. The apparatus of claim 1, wherein the heat sink comprises a bottom
2 surface that is adapted to receive a processor.

1 11. The apparatus of claim 1, wherein the heat sink comprises a top plate
2 and a bottom plate that together form the internal chamber.

1 12. A heat dissipation apparatus, comprising:
2 a heat sink that is adapted to receive a processor mounted thereto, the heat sink
3 comprising an internal chamber;
4 hollow prongs that extend from the heat sink, the hollow prongs being in fluid
5 communication with the internal chamber of the heat sink; and
6 an inlet that is in fluid communication with the internal chamber of the heat
7 sink;
8 wherein fluid forced into the inlet flows into the internal chamber of the heat
9 sink and then through the hollow prongs to exit the heat dissipation apparatus.

1 13. The apparatus of claim 12, wherein the heat sink comprises a top
2 surface and a bottom surface, the hollow prongs extending from the top surface and
3 the bottom surface being adapted to receive a processor.

1 14. The apparatus of claim 13, further comprising an interior flow fan
2 module that is in fluid communication with the inlet and mounted to the heat sink, the
3 interior flow fan module being configured to force fluid into the inlet.

1 15. The apparatus of claim 14, further comprising an exterior flow fan
2 module mounted to the top surface of the heat sink, the exterior flow fan module
3 being configured to force fluid over exterior surfaces of the hollow prongs.

1 16. The apparatus of claim 15, wherein the inlet is defined by a flow
2 director that is positioned between the interior flow fan module and the exterior flow
3 fan module.

1 17. A heat dissipation apparatus, comprising:
2 means for transmitting heat away from a processor;
3 means for enabling flow of fluid through the means for transmitting heat away
4 from a processor; and
5 means for enabling flow of fluid over the means for transmitting heat away
6 from a processor.

1 18. The apparatus of claim 17, wherein the means for transmitting heat
2 comprise a heat sink.

1 19. The apparatus of claim 18, wherein the means for enabling flow of
2 fluid through the means for transmitting heat comprise an internal chamber of the heat
3 sink and an inlet that is in fluid communication with the internal chamber.

1 20. The apparatus of claim 19, wherein the means for enabling flow of
2 fluid through the means for transmitting heat further comprise an internal flow fan
3 module that is mounted to the heat sink and in fluid communication with the inlet.

1 21. The apparatus of claim 17, wherein the means for transmitting heat
2 comprise at least one hollow prong.

1 22. The apparatus of claim 21, wherein the means for enabling flow of
2 fluid through the means for transmitting heat comprise an internal passage of the at
3 least one hollow prong.

1 23. The apparatus of claim 22, wherein the means for enabling flow of
2 fluid over the means for transmitting heat comprise an external flow fan module.

1 24. A method for dissipating heat generated by a processor, the method
2 comprising:

3 forcing fluid through an internal chamber formed within a heat sink to which
4 the processor is mounted;

5 forcing the fluid from the internal chamber of the heat sink through at least one
6 hollow prong that extends from the heat sink and that is in fluid communication with
7 the internal chamber of the heat sink; and

8 forcing fluid over exterior surfaces of the at least one hollow prong.

1 25. The method of claim 24, wherein forcing fluid through an internal
2 chamber comprises forcing air into the internal chamber using a fan module that is
3 mounted to the heat sink.

1 26. The method of claim 24, wherein forcing fluid through an internal
2 chamber comprises forcing air into the internal chamber using a fan that is separate
3 from the heat sink.

1 27. The method of claim 24, wherein forcing fluid over exterior surfaces of
2 the at least one prong comprises forcing air over the at least one prong using a fan
3 module that is mounted to the heat sink.

1 28. The method of claim 24, wherein forcing fluid over exterior surface of
2 the at least one prong comprises forcing fluid over exterior surfaces of the at least one
3 prong using a fan that is separate from the heat sink.

1 29. A computer, comprising:
2 a processor; and
3 a heat dissipation apparatus that includes a heat sink that is adapted to receive
4 the processor, the heat sink comprising an internal chamber that is adapted to receive a
5 fluid flow that removes heat from the heat sink.

1 30. The computer of claim 29, wherein the heat dissipation apparatus
2 further comprises at least one hollow prong that extends from the heat sink, the at
3 least one hollow prong being in fluid communication with the internal chamber of the
4 heat sink such that fluid forced into the internal chamber flows through the at least
5 one hollow prong.

1 31. The computer of claim 30, further comprising a fan that forces fluid
2 over external surfaces of the at least one prong.

1 32. The computer of claim 31, wherein the fan is part of an external flow
2 fan module that is mounted to the heat sink.

1 33. The computer of claim 29, wherein the heat dissipation apparatus
2 further comprises an inlet that is in fluid communication with the internal chamber of
3 the heat sink such that fluid forced into the inlet flows into the internal chamber.

1 34. The computer of claim 33, further comprising a fan that is in fluid
2 communication with the inlet.